

Notice of Allowability

Application No.

10/731,841

Examiner

Pho M. Luu

Applicant(s)

LEE ET AL.

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed on 03/01/2006.
2. ☒ The allowed claim(s) is/are 1 and 3-27.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
- ☐ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☒ Other Updated Search History.

RICHARD ELMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Allowance

1. Acknowledgment is made of applicant's Amendment, filed 01 March 2006. The changes and remarks disclosed therein were considered.
2. Claim 2 have been canceled.
3. Claims 1 and 3-27 are pending in the application.
4. Claims 1 and 3-27 are allowed.

The following is an examiner's statement of reasons for allowance:

There is no teaching or suggestion in the prior art to provide:

"an operation control unit for generating the read command signal and the read/write signal to turn on both the direct sense AMP circuit and the input/output gate circuit in response to a column address signal and a write command in a data read operation, and for generating the read command signal and the read/write signal to turn on the input/output gate circuit and to turn off the direct sense AMP circuit in a data write operation" in a circuit for use in a semiconductor memory as claimed in the independent claim 1. Claims 3-4 are also allowed because of their dependency on claim 1; or

"a second sense transistor having a first end connected to the second data input/output line and a gate connected to the first bit line and a third sense transistor having a first end connected ^{to} ~~for~~ second ends of the first sense transistor and the second sense transistor, a second end connected to a ground voltage, and a gate connected to the read command signal" in a circuit for use in a

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semiconductor memory as claimed in the independent claim 5. Claim 6 is also allowed because of their dependency on claim 5; or

“a third sense transistor having a first end connected to a second end of the first sense transistor, a gate connected tot the read command signal and a second end connected to the first data input/output line” in a circuit use in a semiconductor memory as claimed in the independent claim 7. Claim 8 is also allowed because of their dependency on claim 7; or

“an input/output gate circuit for transmitting the read data loaded in the bit line pair to the data input/output line pair in response to the read/write signal during the data read operation and for transmitting write data loaded in the data input/output line pair to the bit line pair in response to the read/write signal during the data write operation” in a sense amplifying circuit for use in semiconductor memory as claimed in the independent claim 9. Claims 10-17 are also allowed because of their dependency on claim 9; or

“a write/read control unit for passing the read data generated from the direct sense AMP circuit component to the data input/output line pair in response to a write block signal in the data read operation and for blocking connection between the direct sense AMP circuit component and the data input/output line pair in the data write operation” in a sense amplifying for use in a semiconductor memory as claimed in the independent claim 18. Claims 19-27 are also allowed because of their dependency on claim 18.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pho M. Luu whose telephone number is 571.272.1876. The examiners can normally be reached on M-F 8:00AM – 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Richard Elms, can be reached on 571.272.1869. The official fax number for the organization where this application or proceeding is assigned is 703.872.9306 for all official communications.

The information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).